

FCC Test Report

(PART 24)

Report No.: RF190227C20-1

FCC ID: 2AQYEFMP168

Test Model: F-03L

Received Date: Feb. 27th, 2019

Test Date: Mar. 18th, 2019 ~ Mar. 22th, 2019

Issued Date: Apr. 08, 2019

Applicant: FUJITSU CONNECTED TECHNOLOGIES Ltd.

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**FCC Registration /
Designation Number:** 427177 / TW0011



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Release Control Record

Issue No.	Description	Date Issued
RF190227C20-1	Original Release	Apr. 08, 2019

1 Certificate of Conformity

Product: Feature Phone

Brand: FUJITSU

Test Model: F-03L


Sample Status: Engineering Sample

Applicant: FUJITSU CONNECTED TECHNOLOGIES Ltd.

Test Date: Mar. 18th, 2019 ~ Mar. 22th, 2019

Standards: FCC Part 24, Subpart E

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by : , **Date:** Apr. 08, 2019
Ivonne Wu / Supervisor

Approved by : , **Date:** Apr. 08, 2019
Dylan Chiou / Project Engineer

2 Summary of Test Results

Applied Standard: FCC Part 24 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 24.232	Effective Isotropic Radiated Power	Pass	Meet the requirement of limit.
2.1047	Modulation Characteristics	Pass	Meet the requirement.
2.1046 24.232(d)	Peak to Average Ratio	Pass	Meet the requirement of limit.
2.1055 24.235	Frequency Stability	Pass	Meet the requirement of limit.
2.1049	Occupied Bandwidth	Pass	Meet the requirement of limit.
24.238	Band Edge Measurements	Pass	Meet the requirement of limit.
2.1051 24.238	Conducted Spurious Emissions	Pass	Meet the requirement of limit.
2.1053 24.238	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -32.34 dB at 5640.00 MHz.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Radiated Emissions up to 1 GHz	9 kHz ~ 30 MHz	3.0400 dB
	30 MHz ~ 200 MHz	2.0153 dB
	200 MHz ~ 1000 MHz	2.0224 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	1.0121 dB
	18 GHz ~ 40 GHz	1.1508 dB

2.2 Test Site and Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver Agilent Technologies	N9038A	MY52260177	Aug. 20, 2018	Aug. 19, 2019
Spectrum Analyzer ROHDE & SCHWARZ	FSV40	100980	Apr. 17, 2018	Apr. 16, 2019
Spectrum Analyzer ROHDE & SCHWARZ	FSW26	102023	Oct. 11, 2018	Oct. 10, 2019
BILOG Antenna SCHWARZBECK	VULB9168	9168-616	Nov. 27, 2018	Nov. 26, 2019
HORN Antenna ETS-Lindgren	3117	00143293	Nov. 25, 2018	Nov. 24, 2019
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-969	Nov. 25, 2018	Nov. 24, 2019
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 16, 2018	Apr. 15, 2019
MXG Vector signal generator Agilent	N5182B	MY53050430	Nov. 19, 2018	Nov. 18, 2019
Preamplifier Agilent	310N	187226	Jun. 19, 2018	Jun. 18, 2019
Preamplifier Agilent	83017A	MY39501357	Jun. 19, 2018	Jun. 18, 2019
RF signal cable ETS-LINDGREN	5D-FB	Cable-CH1-01(RF C-SMS-100-SMS- 120+RFC-SMS-1 00-SMS-400)	Jun. 19, 2018	Jun. 18, 2019
RF signal cable ETS-LINDGREN	8D-FB	Cable-CH1-02(RF C-SMS-100-SMS- 24)	Jun. 19, 2018	Jun. 18, 2019
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Software BV ADT	E3 8.130425b	NA	NA	NA
Antenna Tower MF	NA	NA	NA	NA
Turn Table MF	NA	NA	NA	NA
Antenna Tower & Turn Table Controller MF	MF-7802	NA	NA	NA
Communications Tester-Wireless Agilent	8960 Series 10	MY53201073	Jun. 28, 2017	Jun. 27, 2019
Temperature & Humidity Chamber	GTH-120-40-CP-AR	MAA1306-019	Sep. 05, 2018	Sep. 04, 2019
DC Power Supply Topward	33010D	807748	NA	NA

- Note: 1. The calibration interval of the above test instruments is 12 / 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HsinTien Chamber 1.
3. The horn antenna and preamplifier (model: 83017A) are used only for the measurement of emission frequency above 1 GHz if tested.
4. The IC Site Registration No. is 7450I-1.

3 General Information

3.1 General Description of EUT

Product	Feature Phone	
Brand	FUJITSU	
Test Model	F-03L	
Status of EUT	Engineering Sample	
Power Supply Rating	5.0 Vdc (adapter or cradle or host equipment) 3.8 Vdc (Li-ion battery)	
Modulation Type	GSM/GPRS	GMSK
Frequency Range	GSM/GPRS	1850.2 ~ 1909.8 MHz
Max. EIRP Power	GSM/GPRS	756.83 mW
Emission Designator	GSM/GPRS	247KGXW
Antenna Type	$\lambda/4$ Monopole Antenna with -0.8 dBi gain	
Accessory Device	Refer to Note as below	
Data Cable Supplied	Refer to Note as below	

Note:

1. The EUT contains following accessory devices.

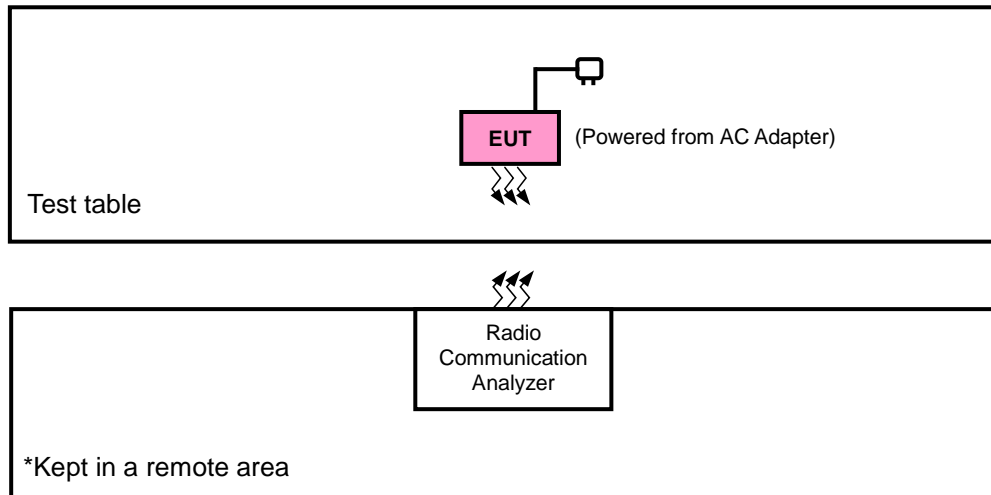
Product	Brand	Model	Description
Adapter	FUJITSU LIMITED	FMV-AC346	I/P: 100-240 Vac, 50/60 Hz, 0.3 A O/P: 5.0 Vdc, 2.0 A
Battery	FUJITSU LIMITED	CA54310-0076	3.8 Vdc, 1680 mAh
Cradle	FUJITSU LIMITED	F49	I/P: 5.0 Vdc, 1.5 A O/P: 5.0 Vdc, 1.5 A

2. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

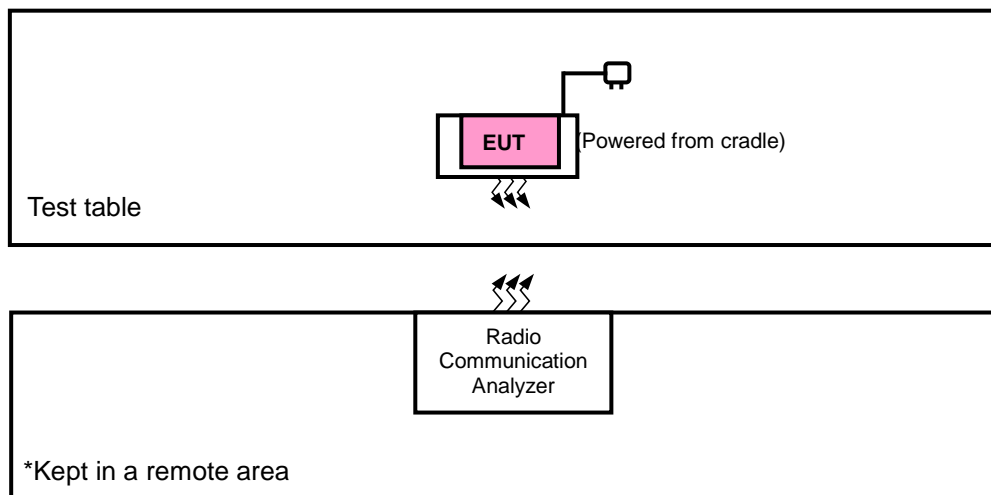
3.2 Configuration of System under Test

<Radiated Emission Test>

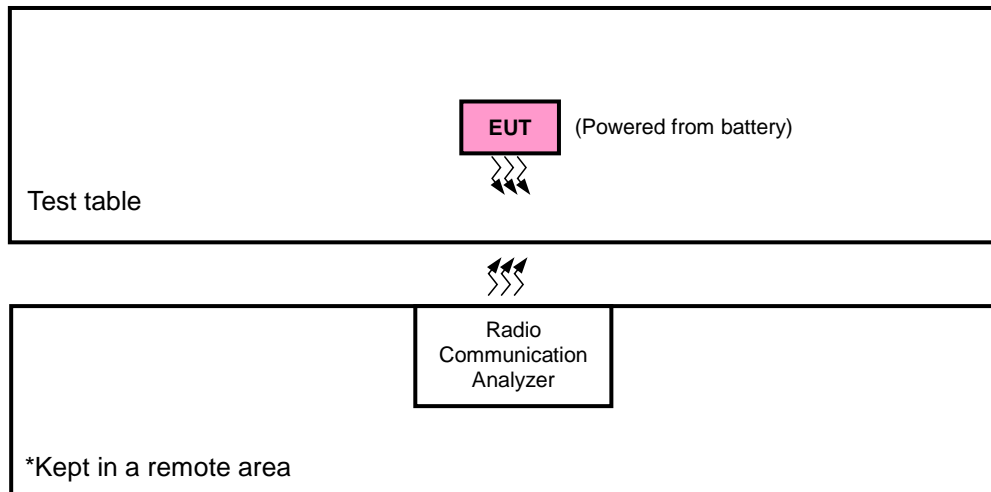
Adapter Mode



Cradle Mode



<E.R.P. Test>



3.2.1 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units.

3.3 Test Mode Applicability and Tested Channel Detail

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis, and antenna ports.

The worst case was found when positioned as the table below. Following channel(s) was (were) selected for the final test as listed below:

Mode	Description
A	EUT with adapter
B	EUT with cradle

✧ After pre-tested, adapter mode was found as the worst case, therefore, adapter mode was chosen for the final test. For cradle mode, only the worst case of radiated emission test below 1 GHz was verified.

Band	EIRP	Radiated Emission
GSM	Y-plane	Y-axis

GSM

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Mode
-	EIRP	512 to 810	512, 661, 810	GSM
-	Modulation Characteristics	512 to 810	661	GSM
-	Frequency Stability	512 to 810	512, 810	GSM
-	Occupied Bandwidth	512 to 810	512, 661, 810	GSM
-	Band Edge	512 to 810	512, 810	GSM
-	Peak to Average Ratio	512 to 810	512, 661, 810	GSM
-	Conducted Emission	512 to 810	512, 661, 810	GSM
-	Radiated Emission	512 to 810	512, 661, 810	GSM

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
EIRP	26 deg. C, 58 % RH	3.8 Vdc	Karl Lee
Modulation Characteristics	26 deg. C, 58 % RH	3.8 Vdc	Getaz Yang
Frequency Stability	26 deg. C, 58 % RH	3.8 Vdc	Getaz Yang
Occupied Bandwidth	26 deg. C, 58 % RH	3.8 Vdc	Getaz Yang
Band Edge	26 deg. C, 58 % RH	3.8 Vdc	Getaz Yang
Peak to Average Ratio	26 deg. C, 58 % RH	3.8 Vdc	Getaz Yang
Conducted Emission	26 deg. C, 58 % RH	3.8 Vdc	Getaz Yang
Radiated Emission	25 deg. C, 65 % RH	120 Vac, 60 Hz	Karl Lee

3.4 EUT Operating Conditions

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency

3.5 General Description of Applied Standards

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC 47 CFR Part 2

FCC 47 CFR Part 24

KDB 971168 D01 Power Meas License Digital Systems v03r01

ANSI/TIA/EIA-603-E 2016

ANSI 63.26-2015

ANSI 63.2 -1996

NOTE: All test items have been performed and recorded as per the above standards.

4 Test Types and Results

4.1 Output Power Measurement

4.1.1 Limits of Output Power Measurement

Mobile / Portable station are limited to 2 watts e.i.r.p.

4.1.2 Test Procedures

EIRP / ERP Measurement:

- a. All measurements were done at low, middle and high operational frequency range. RBW and VBW is 1 MHz for GSM and GPRS mode.
- b. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal 1 GHz) and/or 1.5 m (above 1 GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1 m to 4 m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- c. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a tx cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step b. Record the power level of S.G.
- d. $EIRP = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, $E.R.P \text{ power} = E.I.R.P \text{ power} - 2.15 \text{ dB}$.

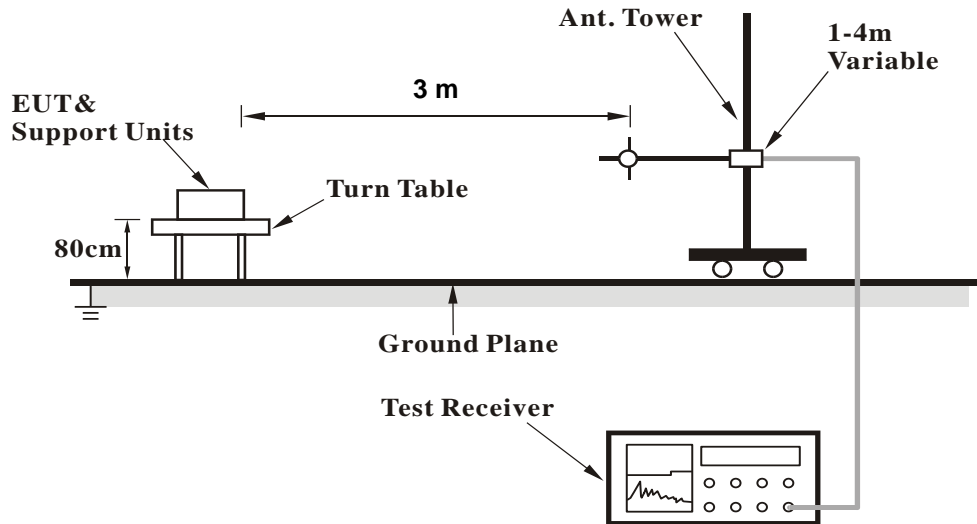
Conducted Power Measurement:

The EUT was set up for the maximum power with GSM and GPRS link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

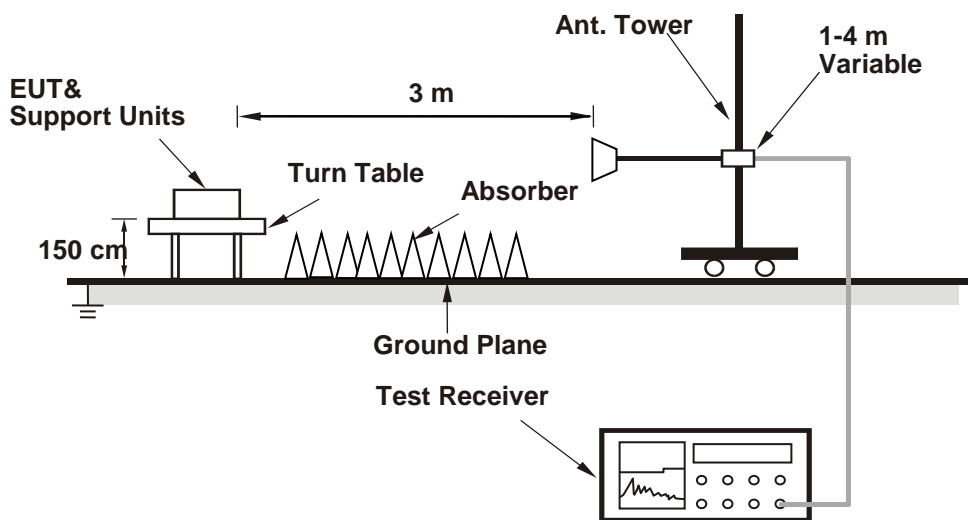
4.1.3 Test Setup

EIRP / ERP Measurement:

<Radiated Emission below or equal 1 GHz>

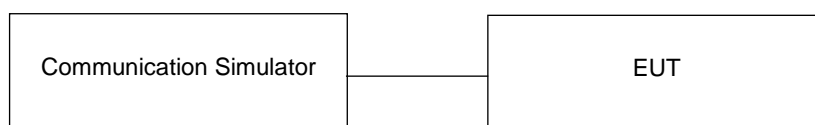


<Radiated Emission above 1 GHz>



For the actual test configuration, please refer to the attached file (Test Setup Photo).

Conducted Power Measurement:



4.1.4 Test Results

Conducted Output Power (dBm)

Band	GSM1900		
	512	661	810
Channel	1850.2	1880.0	1909.8
Frequency (MHz)	1850.2	1880.0	1909.8
GSM (GMSK, 1Tx-slot)	29.25	29.16	29.05
GPRS (GMSK, 1Tx-slot)	29.22	29.13	29.02
GPRS (GMSK, 2Tx-slot)	26.81	26.72	26.61
GPRS (GMSK, 3Tx-slot)	24.98	24.89	24.78
GPRS (GMSK, 4Tx-slot)	23.75	23.66	23.55
DTM (GMSK, 2Tx-slot)	26.77	26.68	26.57
DTM (GMSK, 3Tx-slot)	24.95	24.86	24.75

EIRP Power (dBm)

GSM							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
Y	512	1850.2	-9.40	38.19	28.79	756.83	H
	661	1880.0	-9.94	38.70	28.76	751.62	
	810	1909.8	-10.64	39.35	28.71	743.02	
	512	1850.2	-14.74	38.48	23.74	236.59	V
	661	1880.0	-14.90	38.59	23.69	233.88	
	810	1909.8	-15.22	38.87	23.65	231.74	

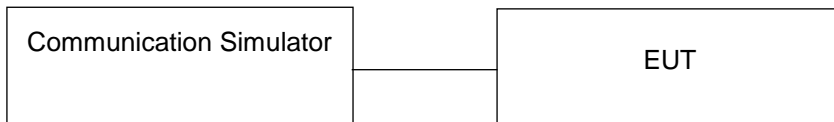
Note: EIRP (dBm) = Reading (dBm) + Correction Factor (dB)

4.2 Modulation Characteristics Measurement

4.2.1 Limits of Modulation Characteristics

N/A

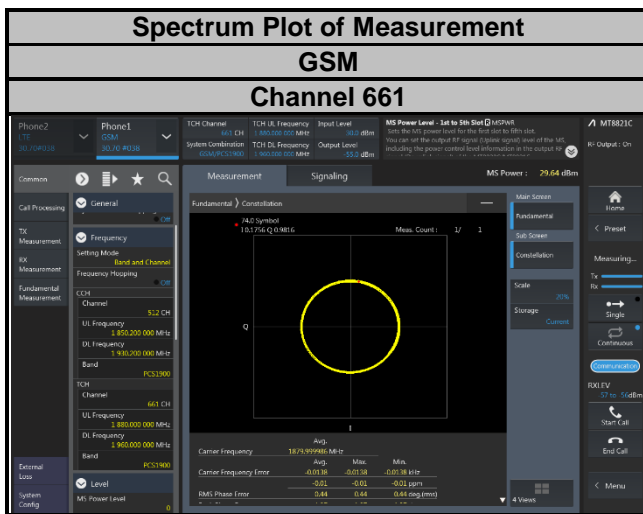
4.2.2 Test Setup



4.2.3 Test Procedure

Connect the EUT to Communication Simulator via the antenna connector. The frequency band is set as EUT supported Modulation and Channels, the EUT output is matched with 50 ohm load, the waveform quality and constellation of the EUT was tested.

4.2.4 Test Results



4.3 Frequency Stability Measurement

4.3.1 Limits of Frequency Stability Measurement

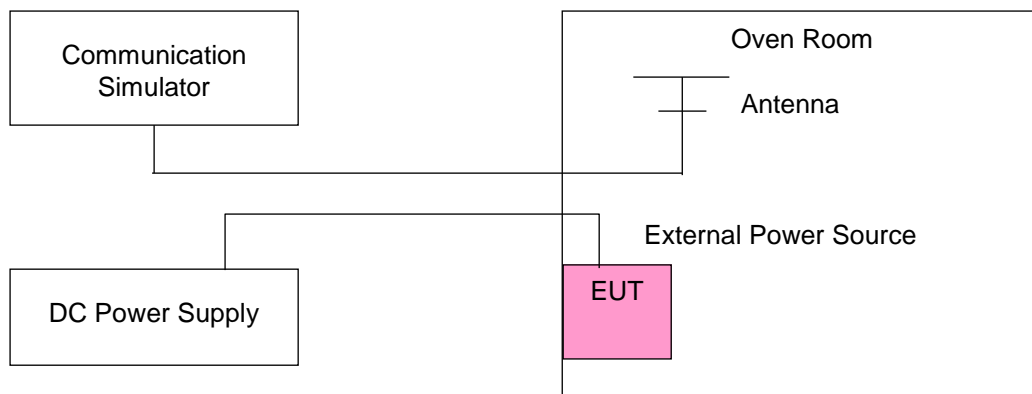
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

4.3.2 Test Procedure

- a. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
- b. EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
- c. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ± 0.5 °C during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

NOTE: The frequency error was recorded frequency error from the communication simulator.

4.3.3 Test Setup



4.3.4 Test Results

Frequency Error vs. Voltage

Voltage (Volts)	GSM			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.8	1850.200001	0.001	1909.800001	0.001
3.23	1850.200002	0.001	1909.800003	0.002
4.37	1850.200004	0.002	1909.800002	0.001

Note: The applicant defined the normal working voltage of the battery is from 3.23 Vdc to 4.37 Vdc.

Frequency Error vs. Temperature

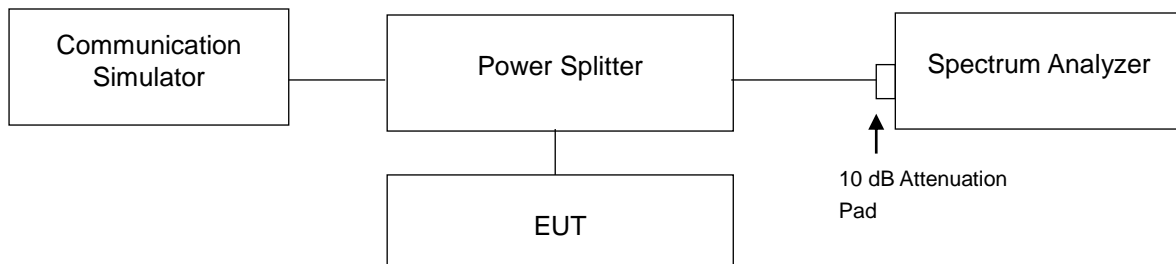
Temp. (°C)	GSM			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1850.200002	0.001	1909.800003	0.001
-20	1850.200003	0.002	1909.800001	0.001
-10	1850.200004	0.002	1909.800002	0.001
0	1850.200001	0.001	1909.800004	0.002
10	1850.200003	0.002	1909.800002	0.001
20	1850.199997	-0.002	1909.799996	-0.002
30	1850.199998	-0.001	1909.799999	-0.001
40	1850.199996	-0.002	1909.799999	-0.001
50	1850.199998	-0.001	1909.799998	-0.001
55	1850.199998	-0.001	1909.799997	-0.002

4.4 Occupied Bandwidth Measurement

4.4.1 Test Procedure

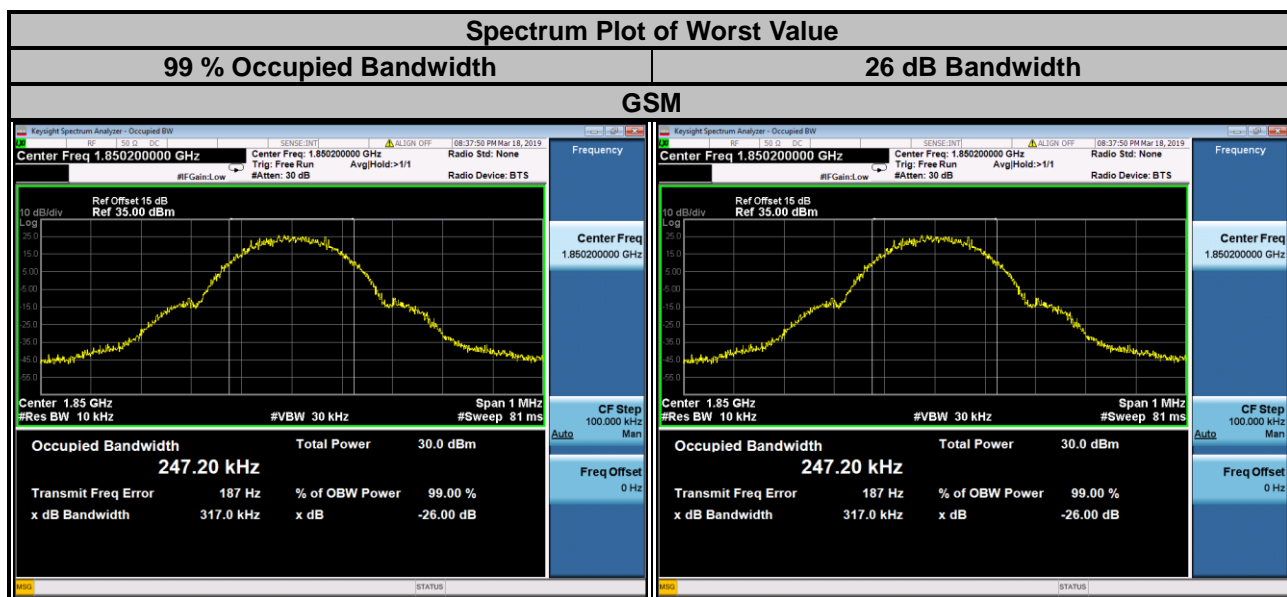
The EUT makes a call to the communication simulator. All measurements were done at low, middle and high operational frequency range. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

4.4.2 Test Setup



4.4.3 Test Result

GSM			
Channel	Frequency (MHz)	99 % Occupied Bandwidth (kHz)	26 dB Bandwidth (kHz)
512	1850.2	247.20	317.00
661	1880.0	247.04	310.10
810	1909.8	246.28	310.00

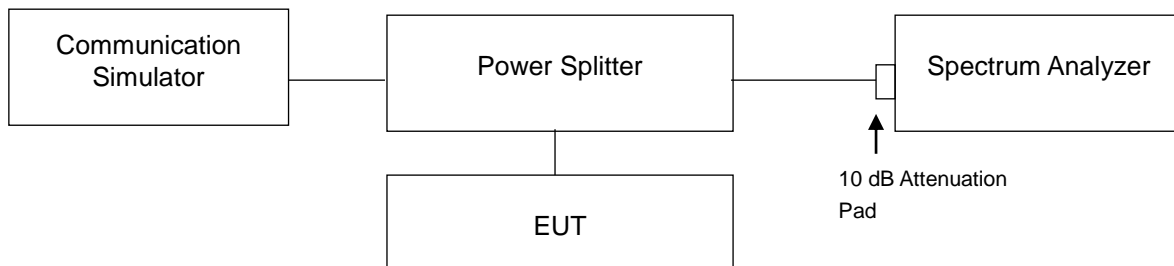


4.5 Band Edge Measurement

4.5.1 Limits of Band Edge Measurement

Power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

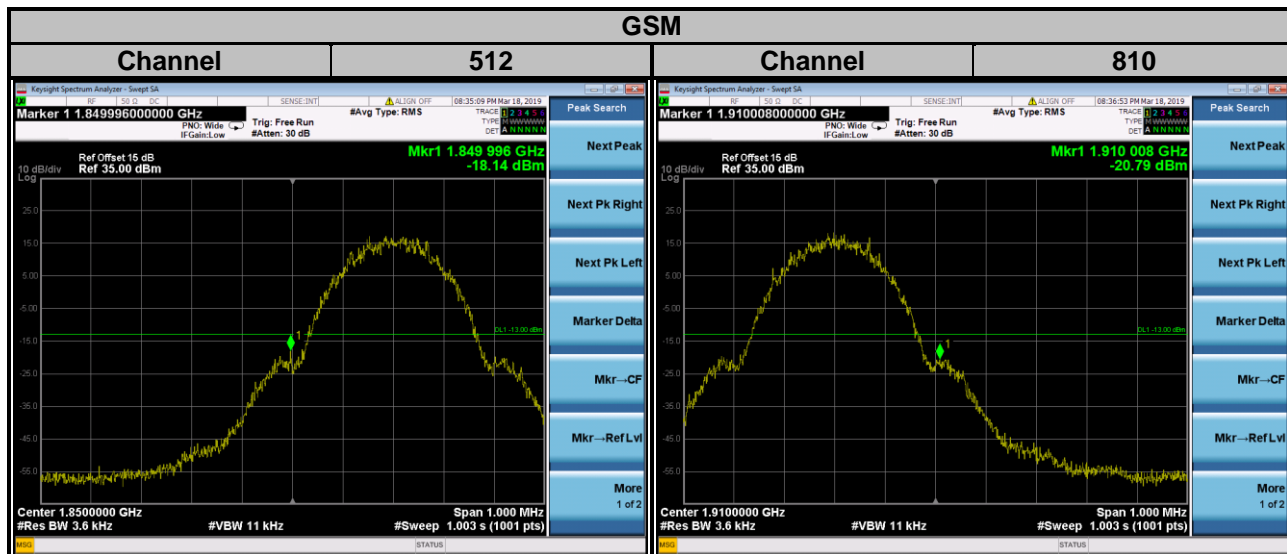
4.5.2 Test Setup



4.5.3 Test Procedures

- All measurements were done at low and high operational frequency range.
- The center frequency of spectrum is the band edge frequency and span is 1 MHz. RB of the spectrum is 3.6 kHz and VB of the spectrum is 11 kHz (GSM/GPRS).
- Record the max trace plot into the test report.

4.5.4 Test Results

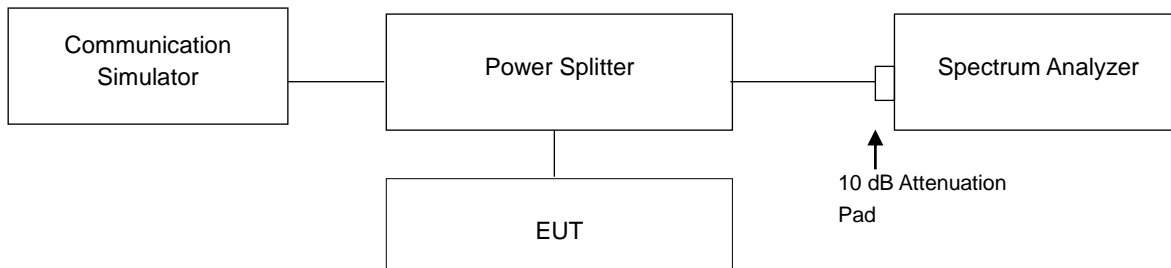


4.6 Peak to Average Ratio

4.6.1 Limits of Peak to Average Ratio Measurement

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB.

4.6.2 Test Setup

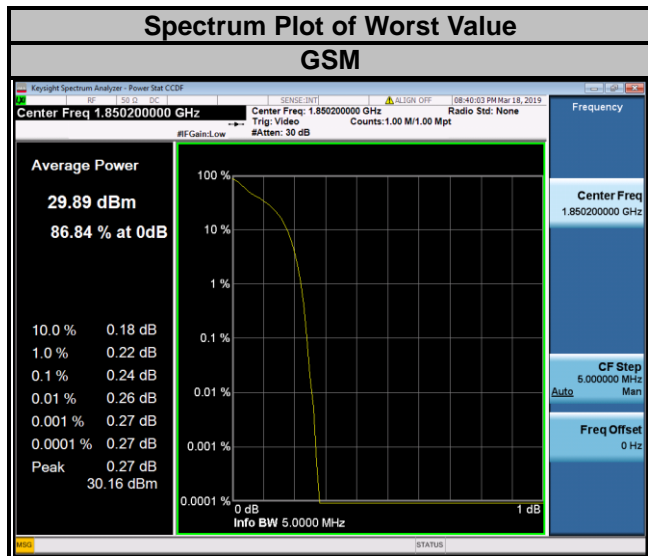


4.6.3 Test Procedures

1. Set resolution/measurement bandwidth \geq signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Record the maximum PAPR level associated with a probability of 0.1 %.

4.6.4 Test Results

Channel	Frequency (MHz)	Peak to Average Ratio (dB)
		GSM
512	1850.2	0.24
661	1880.0	0.23
810	1909.8	0.24

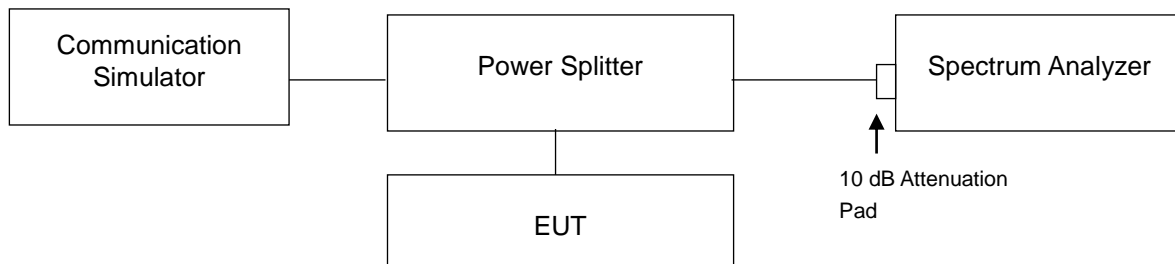


4.7 Conducted Spurious Emissions

4.7.1 Limits of Conducted Spurious Emissions Measurement

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. The emission limit equal to -13 dBm.

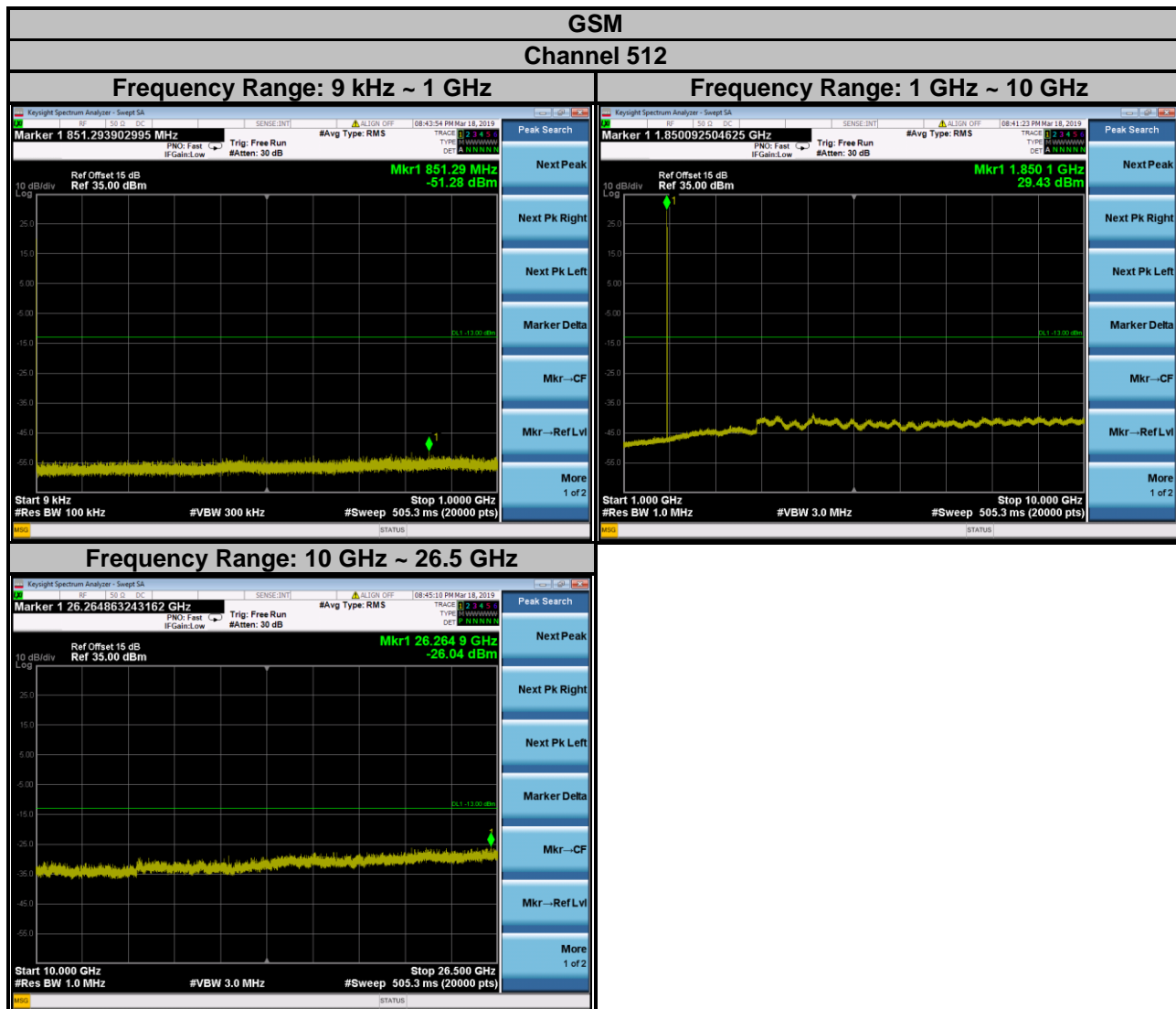
4.7.2 Test Setup



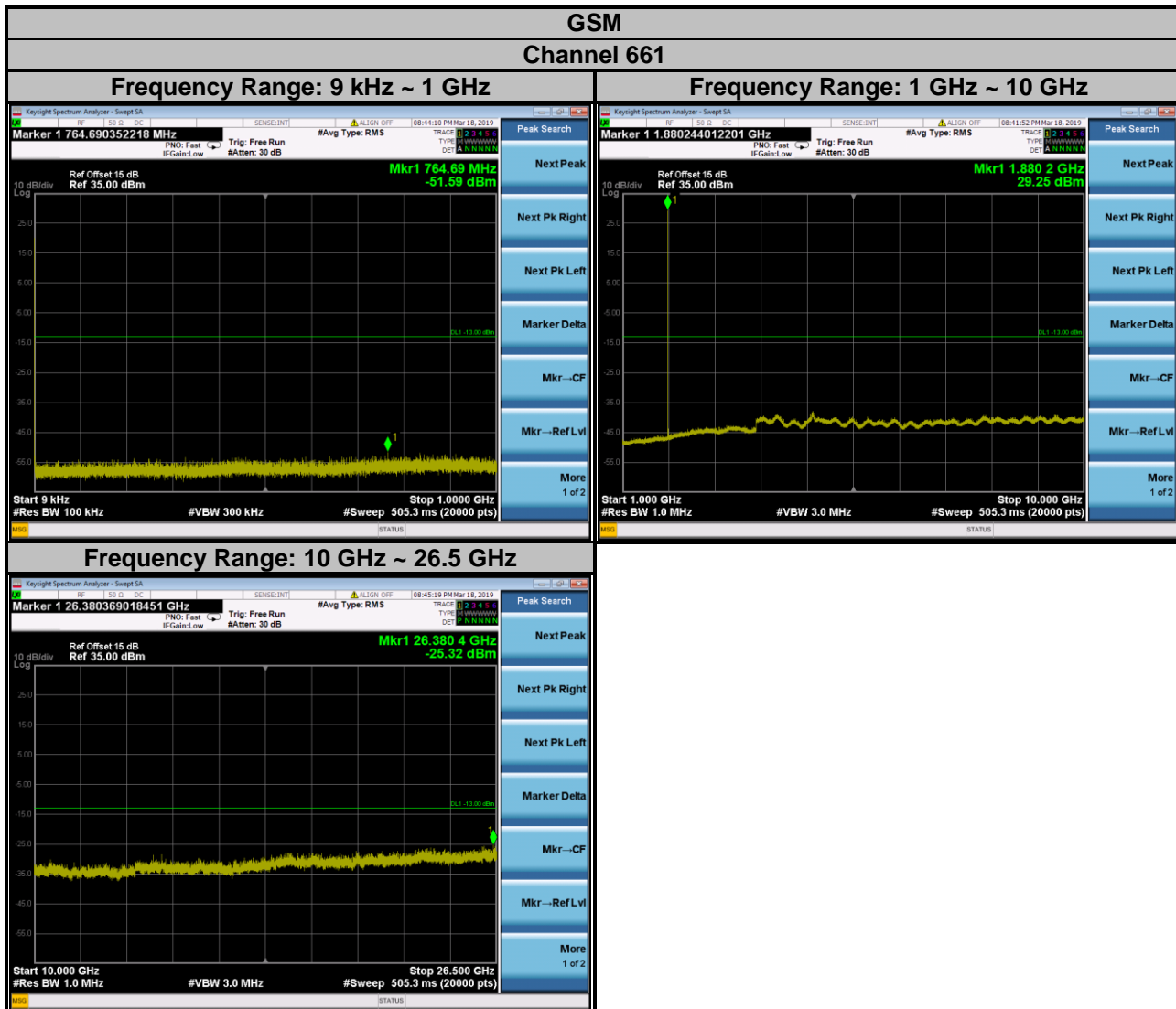
4.7.3 Test Procedure

- The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
- Measuring frequency range is from 9 kHz to 1 GHz. 10 dB attenuation pad is connected with spectrum. RBW = 100 kHz and VBW = 300 kHz is used for conducted emission measurement.
- Measuring frequency range is from 1 GHz to 26.5 GHz. 10 dB attenuation pad is connected with spectrum. RBW = 1 MHz and VBW = 3 MHz is used for conducted emission measurement.
- Spectrum RBW settings are referenced to ANSI 63.2-1996 section 8.2.2 and ANSI 63.26 section 5.7.2.

4.7.4 Test Results



Note: The signal over the limit in 9 kHz is from spectrum analyzer.

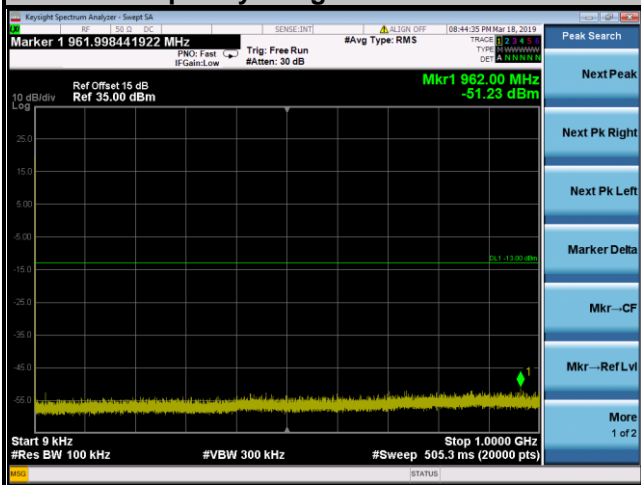


Note: The signal over the limit in 9 kHz is from spectrum analyzer.

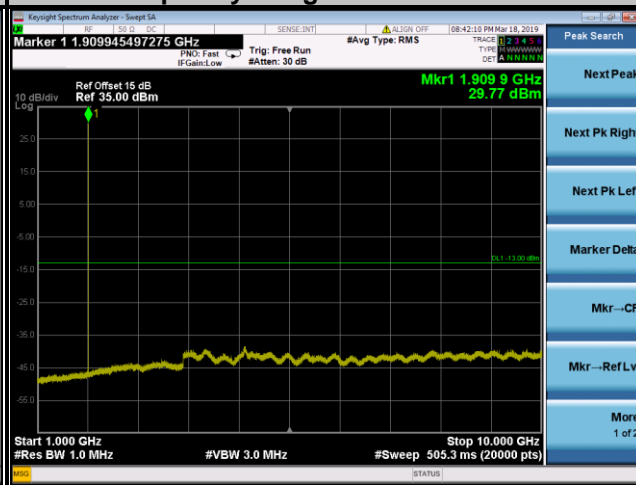
GSM

Channel 810

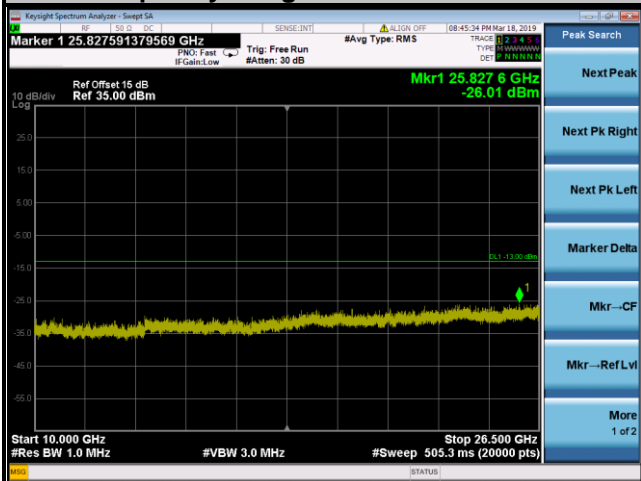
Frequency Range: 9 kHz ~ 1 GHz



Frequency Range: 1 GHz ~ 10 GHz



Frequency Range: 10 GHz ~ 26.5 GHz



Note: The signal over the limit in 9 kHz is from spectrum analyzer.

4.8 Radiated Emission Measurement

4.8.1 Limits of Radiated Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. The emission limit is equal to -13 dBm.

4.8.2 Test Procedure

- a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal 1 GHz) and/or 1.5 m (above 1 GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1 m to 4 m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step a. Record the power level of S.G.
- c. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.
- d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.R.P power - 2.15 dB.

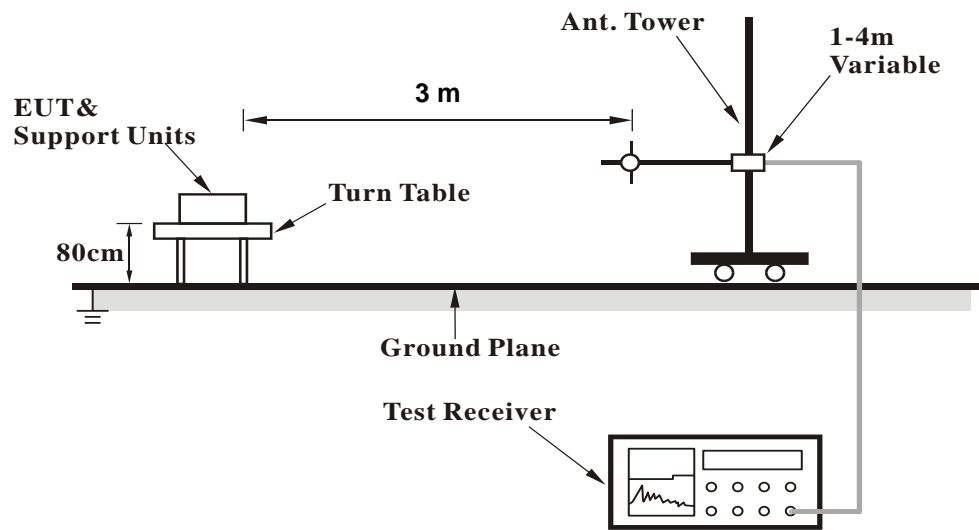
NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz.

4.8.3 Deviation from Test Standard

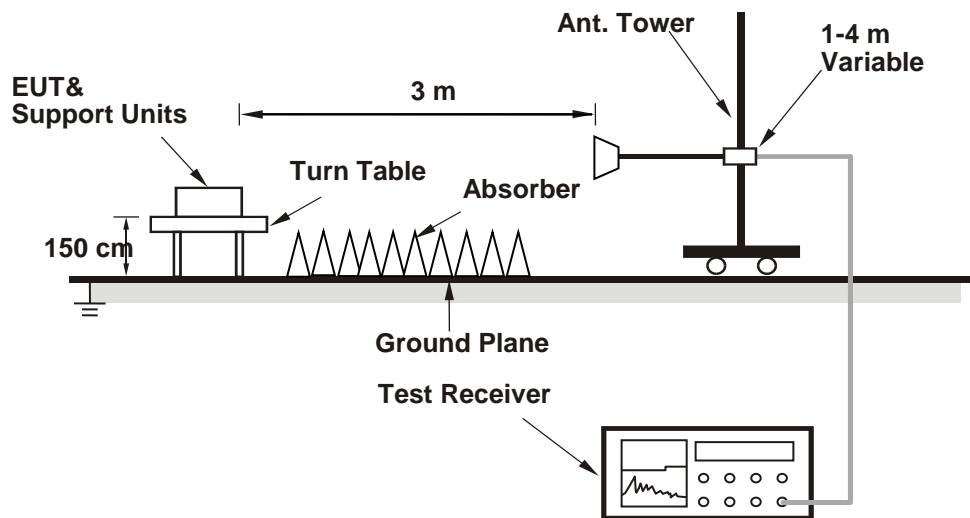
No deviation.

4.8.4 Test Setup

<Radiated Emission below or equal 1 GHz>



<Radiated Emission above 1 GHz>



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.8.5 Test Results

<Adapter Mode>

GSM:

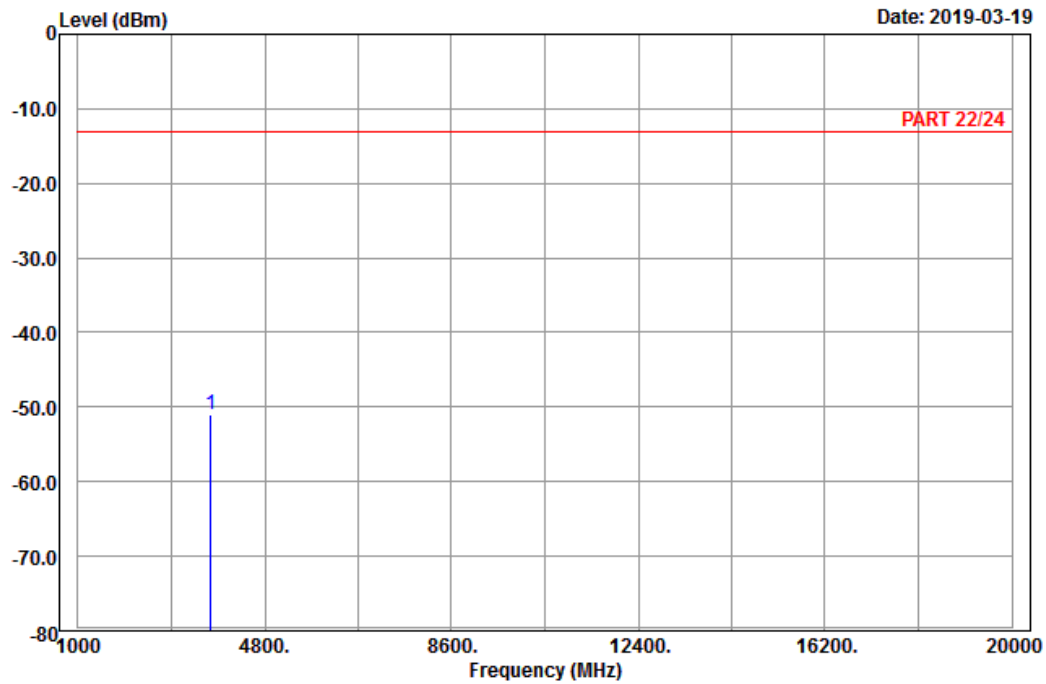
Low Channel



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A D T

Data: 9



Site : 966 chamber 1
 Condition: PART 22/24 Horizontal
 Remark : PCS 1900_Link_CH512
 Tested by: Karl Lee

	Read	Limit	Over		
Freq	Level	Level	Line	Limit	Factor Remark
MHz	dBm	dBm	dBm	dB	dB
1 pp 3700.40	-50.95	-66.83	-13.00	-37.95	15.88 Peak

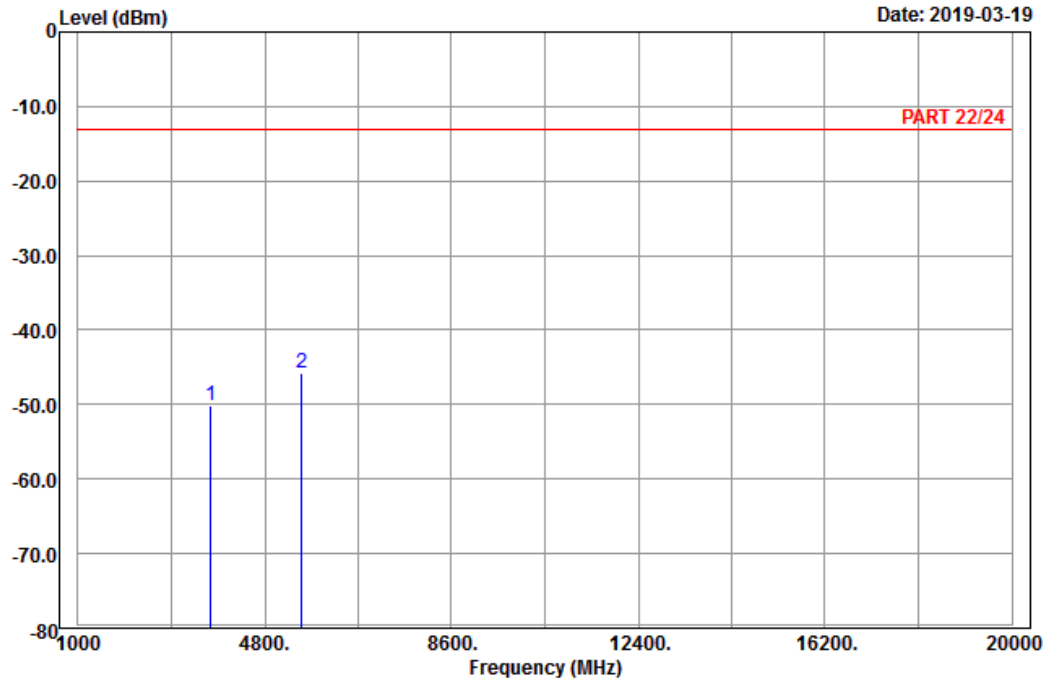


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A D T

Data: 10

Date: 2019-03-19



Site : 966 chamber 1
 Condition: PART 22/24 Vertical
 Remark : PCS 1900_Link_CH512
 Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3700.40	-50.08	-65.96	-13.00	-37.08	15.88	Peak
2 pp	5550.60	-45.76	-66.10	-13.00	-32.76	20.34	Peak

Middle Channel

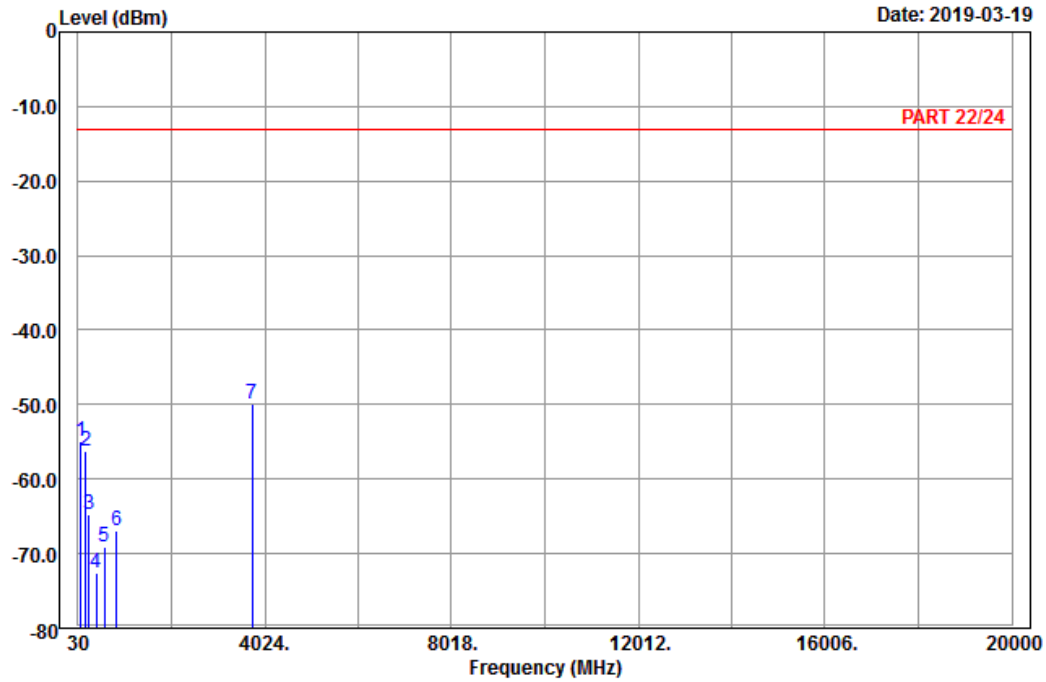


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A D T

Data: 13

Date: 2019-03-19



Site : 966 chamber 1
 Condition: PART 22/24 Horizontal
 Remark : PCS 1900_Link_CH661
 Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	82.65	-54.88	-43.33	-13.00	-41.88	-11.55	Peak
2	189.03	-56.15	-50.43	-13.00	-43.15	-5.72	Peak
3	258.69	-64.75	-59.16	-13.00	-51.75	-5.59	Peak
4	426.00	-72.68	-69.37	-13.00	-59.68	-3.31	Peak
5	597.50	-69.07	-69.38	-13.00	-56.07	0.31	Peak
6	855.10	-67.00	-68.61	-13.00	-54.00	1.61	Peak
7 pp	3760.00	-50.00	-66.14	-13.00	-37.00	16.14	Peak

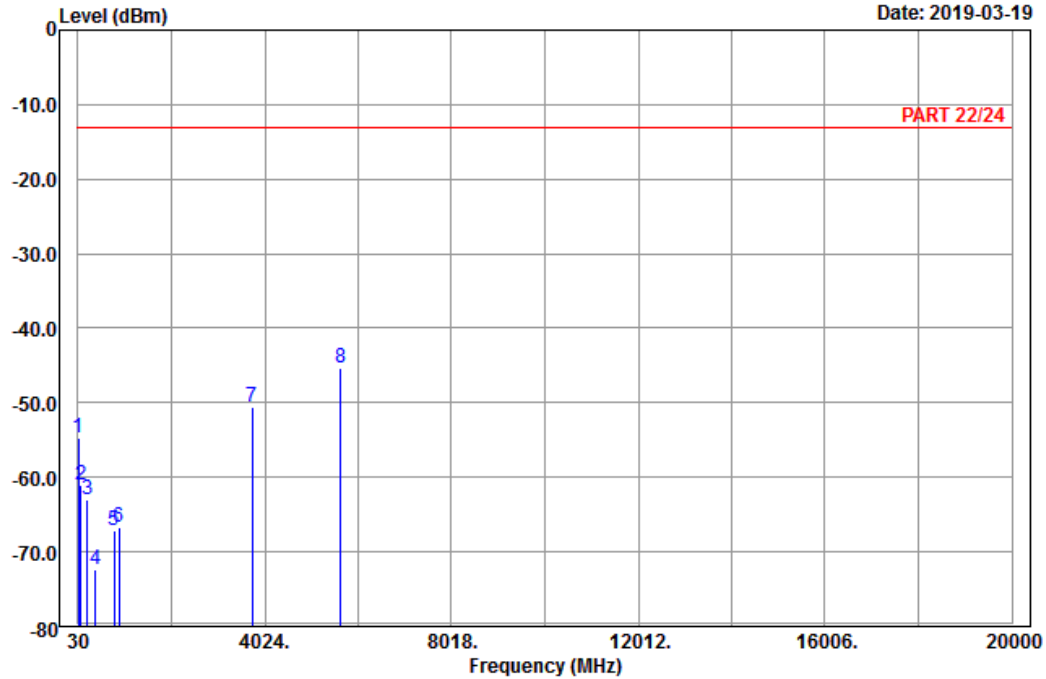


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A D T

Data: 14

Date: 2019-03-19



Site : 966 chamber 1
 Condition: PART 22/24 Vertical
 Remark : PCS 1900_Link_CH661
 Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	32.70	-54.69	-43.82	-13.00	-41.69	-10.87	Peak
2	90.48	-61.11	-50.44	-13.00	-48.11	-10.67	Peak
3	224.67	-63.00	-57.15	-13.00	-50.00	-5.85	Peak
4	400.10	-72.48	-69.72	-13.00	-59.48	-2.76	Peak
5	810.30	-67.07	-68.97	-13.00	-54.07	1.90	Peak
6	912.50	-66.63	-70.08	-13.00	-53.63	3.45	Peak
7	3760.00	-50.59	-66.73	-13.00	-37.59	16.14	Peak
8 pp	5640.00	-45.34	-65.81	-13.00	-32.34	20.47	Peak

High Channel

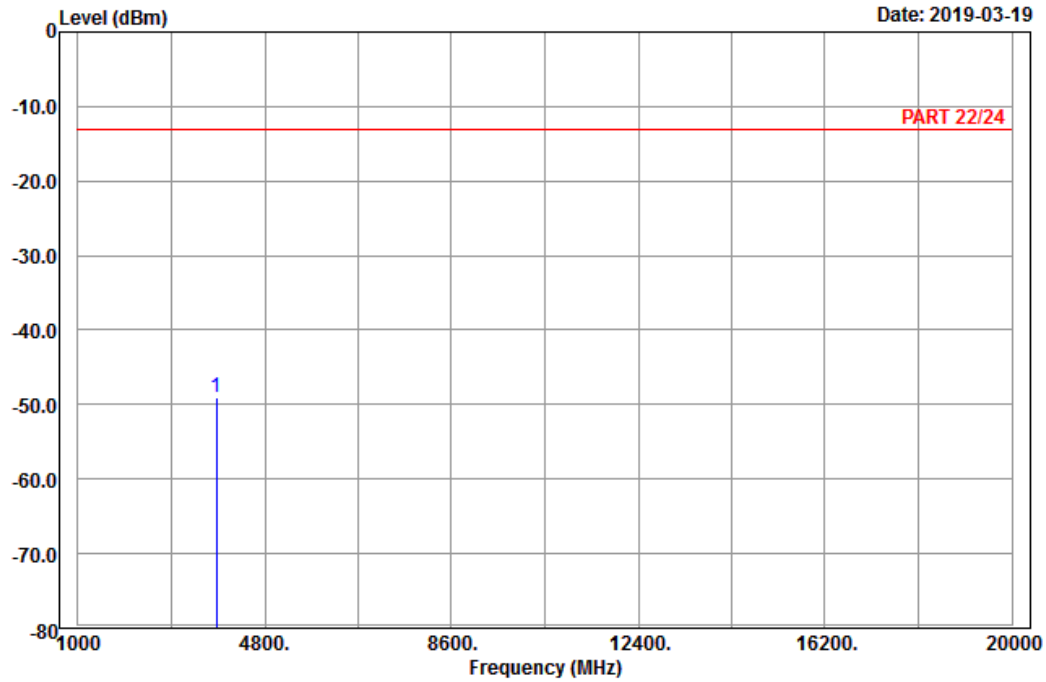


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A D T

Data: 9

Date: 2019-03-19



Site : 966 chamber 1
 Condition: PART 22/24 Horizontal
 Remark : PCS 1900_Link_CH810
 Tested by: Karl Lee

Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
MHz	dBm	dBm	dBm	dB	dB	
1 pp 3819.60	-48.97	-65.47	-13.00	-35.97	16.50	Peak

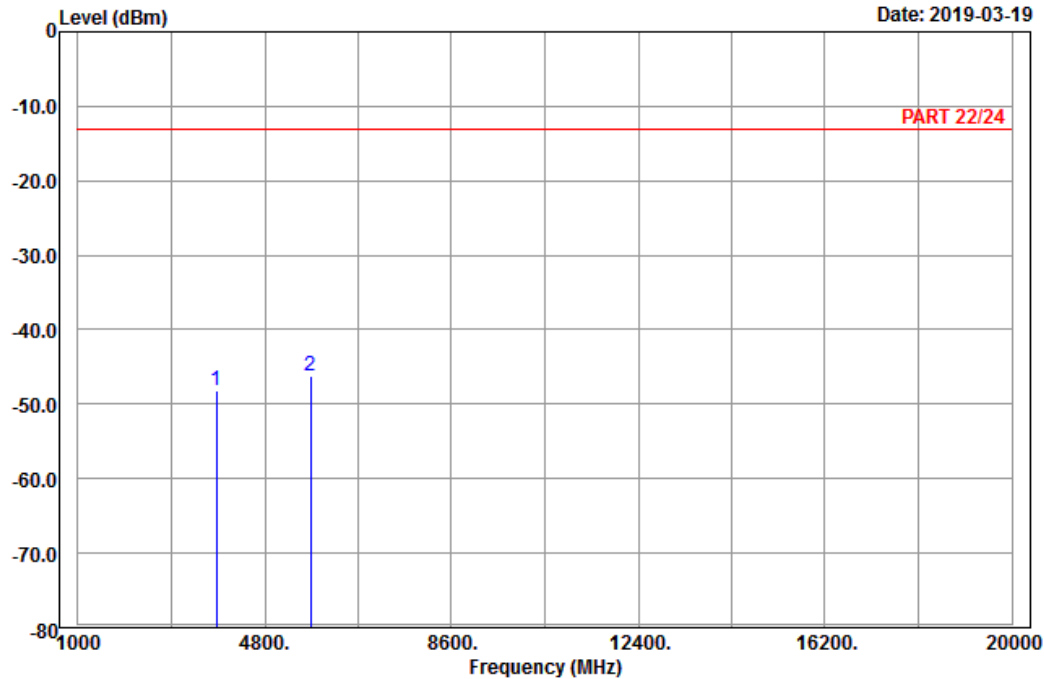


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A D T

Data: 10

Date: 2019-03-19



Site : 966 chamber 1
 Condition: PART 22/24 Vertical
 Remark : PCS 1900_Link_CH810
 Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3819.60	-48.28	-64.78	-13.00	-35.28	16.50	Peak
2 pp	5729.40	-46.28	-66.62	-13.00	-33.28	20.34	Peak

<Cradle Mode>
 GSM:
 Middle Channel

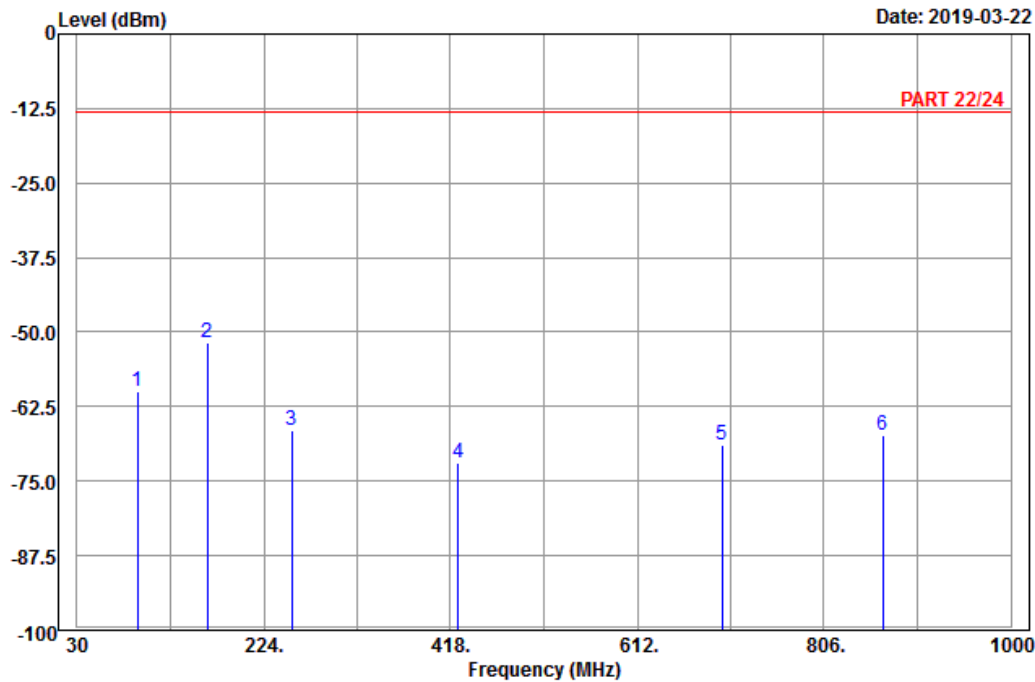


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A D T

Data: 5

Date: 2019-03-22



Site : 966 chamber 1
 Condition: PART 22/24 Horizontal
 Remark : PCS 1900_Link_CH661
 Tested by: Karl Lee

	Read	Limit	Over			
Freq	Level	Level	Line	Limit	Factor	Remark
MHz	dBm	dBm	dBm	dB	dB	
1	92.64	-59.83	-49.32	-13.00	-46.83	-10.51 Peak
2	165.54	-51.84	-44.75	-13.00	-38.84	-7.09 Peak
3	252.75	-66.48	-60.95	-13.00	-53.48	-5.53 Peak
4	426.00	-71.89	-68.58	-13.00	-58.89	-3.31 Peak
5	700.40	-68.90	-68.52	-13.00	-55.90	-0.38 Peak
6	867.00	-67.31	-69.26	-13.00	-54.31	1.95 Peak

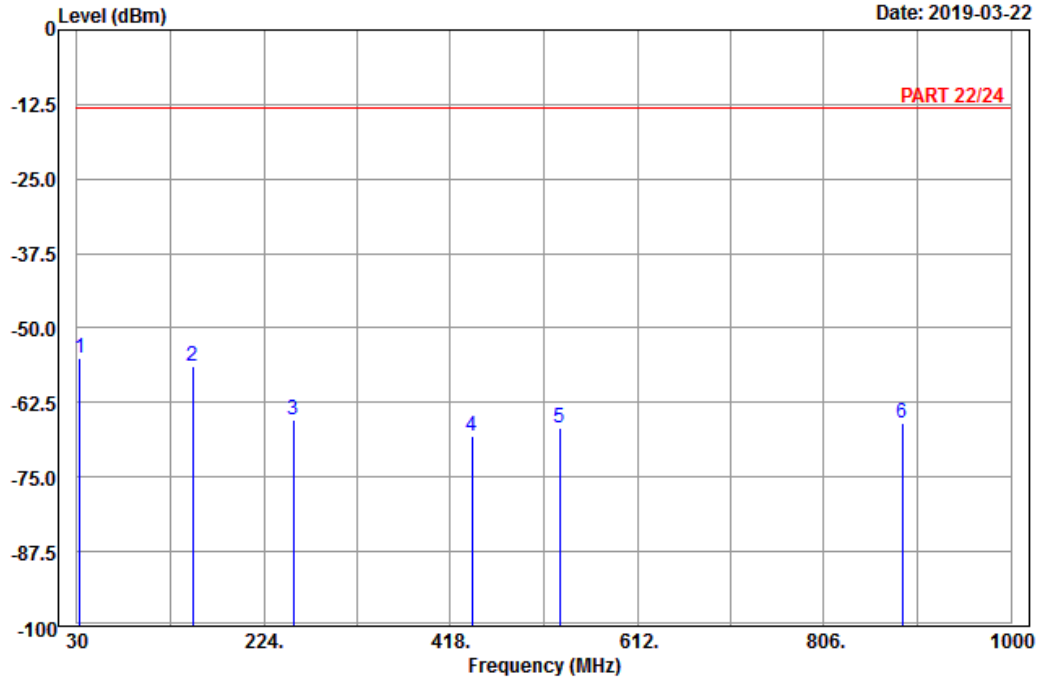


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A D T

Data: 6

Date: 2019-03-22



Site : 966 chamber 1
 Condition: PART 22/24 Vertical
 Remark : PCS 1900_Link_CH661
 Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	33.24	-54.98	-44.11	-13.00	-41.98	-10.87	Peak
2	150.42	-56.39	-48.44	-13.00	-43.39	-7.95	Peak
3	255.18	-65.34	-59.79	-13.00	-52.34	-5.55	Peak
4	440.70	-68.06	-64.43	-13.00	-55.06	-3.63	Peak
5	531.70	-66.65	-63.64	-13.00	-53.65	-3.01	Peak
6	887.30	-66.03	-68.56	-13.00	-53.03	2.53	Peak

5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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Web Site: www.bureauveritas-adt.com

The address and road map of all our labs can be found in our web site also.

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